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Nota di contenuto	AI and TRIZ: Mapping the Evolutionary Journey of TRIZ and Pioneering Its Next S-Curve in the Age of AI-Aided Invention -- Question Answering with Transformers and Few-Shot Learning to find Inventive Solutions for IDM-TRIZ Problems and Contradictions in Patents -- TRIZ, Truth & AI -- Opening Up New Fields of Applications with TRIZ Reverse – Conceptual Framework, Software Application, and Implementation

Challenges -- A Multi-Stage AI-based Approach for Automatic Analyzation of Bike Paths -- Intelligent Character Recognition of Handwritten Forms with Deep Neural Networks -- Innovation Logic: benefits of a TRIZ-like mind in AI or text analysis of patent literature -- AI based Pointer to Geometric Effects -- Assessing the environmental performance of the food industry using unsupervised machine learning -- Multi-domain and heterogeneous data driven innovative problem solving: Towards a unified representation framework -- Navigating the Knowledge Network: How Inter-Domain Information Pairing and Generative AI Can Enable Rapid Problem-Solving -- Enhancing Creativity in Deep Learning Models with SAVE-Inspired Activation Functions -- Sustainable development: Sustainability, TRIZ and Packaging -- Function-Oriented Search, TRIZ and the Sustainable Use of Information Resources -- Unified Eco-innovation Methodology Based on TRIZ and CK -- Classification of Nature-Inspired Inventive Principles for Eco-innovation and their Assignment to Environmental Problems in Chemical Industry -- Integrating TRIZ and MCDM for Innovative and Sustainable Decision-Making: A Case Study in the Life Cycle of Olive Oil -- How to Inspire Students for TRIZ – TRIZ as an Enabler for Product Development in a new Sustainable Study Program -- Problem modelling for sustainability in business environment by linking TRIZ and Systems Engineering -- The Law of Reliable Resource Supply: Making Altshuller's Laws of System Evolution Sustainable -- Problem Analysis for Green Industrial Policy -- General Vision of TRIZ: TRIZ Ideas in a Systematic Presentation -- Partially defined Boolean functions in TRIZ -- Functional Value of TRIZ Components - universal Concept and direct Implications -- Use of Function Analysis in the Design of multi-functional products -- Functional Approach to Subversion Analysis in New Product Development -- Impact of theory of inventive problem solving (TRIZ) on innovation portfolio development -- Determination of Optimal Functionality -- TRIZ in marketing management: study of current situation -- TRIZ impact in Society: Using TRIZ to write a good thesis on time -- Improving Usability Services and User Experience of Online Museum Virtual Exhibition with TRIZ Theory -- An Experiment on the Impact of TRIZ-Inspired Thinking on Solving Insight Problems -- Bringing back a source – TRIZ in Social Science -- WTSP Report (6) Catalogs of TRIZ and Around-TRIZ Sites in the World (Preparing for Gamma Edition) -- TRIZ And Chaos: First Principles For Emergency First Responders -- Assessing Business Excellence Approaches from the Perspective of Directors: Exploring the Role of TRIZ -- TRIZ-based model of social system -- TRIZ Case studies: Bubble Defect Mitigation for Semiconductor Lithography Process -- Research on Production Innovation Problem Identification Process Based on FRT -- The Impact of Using Resources on Waiting Time in the Queueing Model with FlexSim -- Incorporating TRIZ Methodology into Semi-Structured Interviews for Innovative Insights -- Dilemma or False Dilemma: A Sequence of Steps to Avoid the Trolley -- TRIZ-based Approach in Remodeling Invasive Glucometer.

Sommario/riassunto

This book constitutes the proceedings of the 23rd International TRIZ Future Conference on Towards AI-Aided Invention and Innovation, TFC 2023, which was held in Offenburg, Germany, during September 12–14, 2023. The event was sponsored by IFIP WG 5.4. The 43 full papers presented in this book were carefully reviewed and selected from 80 submissions. The papers are divided into the following topical sections: AI and TRIZ; sustainable development; general vision of TRIZ; TRIZ impact in society; and TRIZ case studies.
